

Metrics that Matter for Engineering Leaders

Presented by Dan Lines

November 2019

Professional Experience

- 2nd employee to join Cloudlock (130 people at acquisition)
- Roles: Developer, Team Leader, Director of Eng, VP of Eng
- VP of Eng: Scaled from 35 to 75 contributors
- Global Team: US east-west, Ukraine, Israel & UK
- Co-founder of LinearB: Dedicated to helping Eng leaders succeed!



Dan Lines

VP of Engineering
Cloudlock / Cisco

Co-founder
LinearB

Experience



2008 - 2016
\$293M



2018 - Present

?

About Me

From east coast - recent move to LA
Into sports data & analytics
Video games, music, golf & health?
Life change coming, 1st baby on way

 **Santa Monica, CA**

My Journey

- ❖ First Time VP ~30 Contributors
 - I know what's happening, things seem good?
- ❖ Scaling up to 75 + Growing customer base
 - Woah...what is happening? How do I make an impact?
- ❖ Management by Anecdote
 - Some teams struggled
 - Difficult to really help my people
- ❖ Executive table challenges - where is the data?
- ❖ Wish I had metrics!
 - But which metrics actually help?!?



Why Bother...Why Measure?

- ❖ What is the #1 role of a leader?
 - Metrics can be your guideposts
- ❖ Outcomes we can achieve:
 - **Visibility into what is really happening**
 - **Improved Delivery Predictability (“Features on time”)**
 - **Drive focus, team happiness, and influence culture**
 - Increased volume of value to production
 - Improved team efficiency
 - *Improve how you show value (execs)*
 - *Framework for team success*
 - Become data-driven



What Metrics Actually Matter?

1. Delivery Pipeline

- Deliver! From Code to Production.
- Time to Value

2. Investment Profile

- Own Your Time
- Balanced effort approach

3. Quality

- Quality is still king
- Efficiency boost



Your Software Delivery Pipeline

What is a delivery pipeline?

- ❖ Phases from “work requested” to production release.
- ❖ Enables your team to deliver code to production.

Why does it matter?

- ❖ High leverage point for improvement across all teams.
- ❖ Improve predictability, time to value, work efficiency, contributor happiness, customer happiness.

Key Metrics

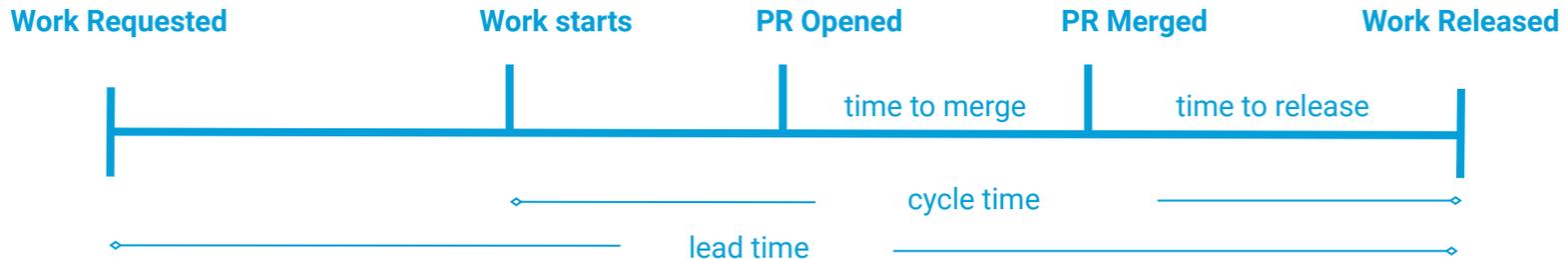
Lead Time: Work request to release

Cycle Time: Work start to release

Time to Merge: PR open to merge

Time to Release: PR merge to release

Release Frequency: Releases per day

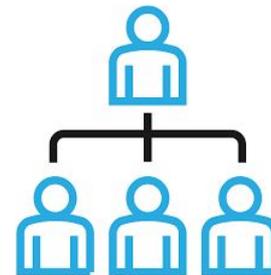


How to use Delivery Performance Metrics?

1. Executive Communication - KPIs
2. Bottleneck Detection
3. Predictable Delivery

Dimensions & Trending:

- ❖ Organization
- ❖ Team
- ❖ Iteration



Your Investment Profile

What is an investment profile?

- ❖ Answers the question, where is my team spending time?
- ❖ Data-driven representation of effort spent by work type.

Why does it matter?

- ❖ People's time is your most scarce & precious resource.
- ❖ Control and balance.

Key Metrics

Story to Bug Ratio:

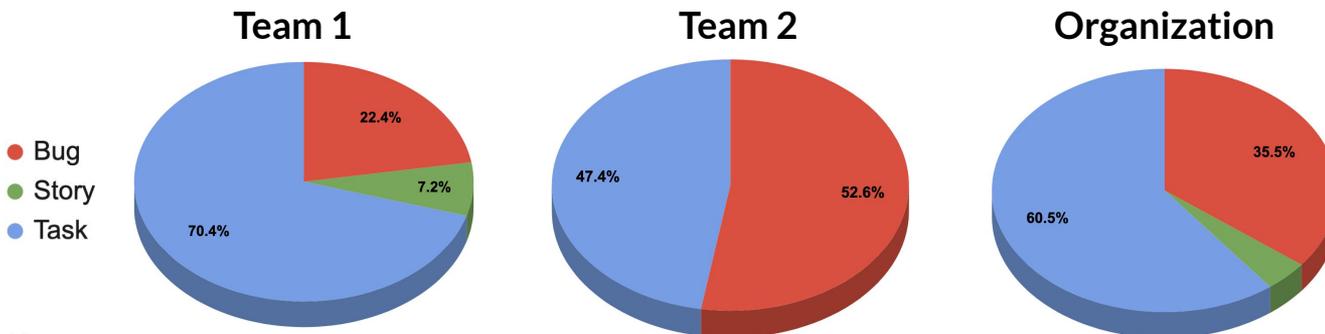
Completed stories to bugs.

Story to Non-functional Ratio:

Completed stories to tasks.

Customer Commitment Percentage:

% work dedicated to commitments.

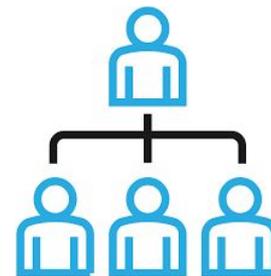


How to use Investment Profile Metrics?

1. Control the conversation
2. Balanced effort
3. Team Leader communication

Dimensions & Trending:

- ❖ Organization
- ❖ Team
- ❖ Iteration



Your Quality

What is Quality?

- ❖ Many definitions but I like to relate to efficiency.

Why does it matter?

- ❖ Efficiency booster or efficiency killer.
- ❖ High impact on delivery predictability.

Key Metrics

Code Rework:

% of recently released code that is rewritten.

Bugs Found in Prod (change fail rate):

Amount of bugs found in prod / timeframe.

Time to restore:

From prod incident to remediation.

WORK BREAKDOWN week 36

New Work

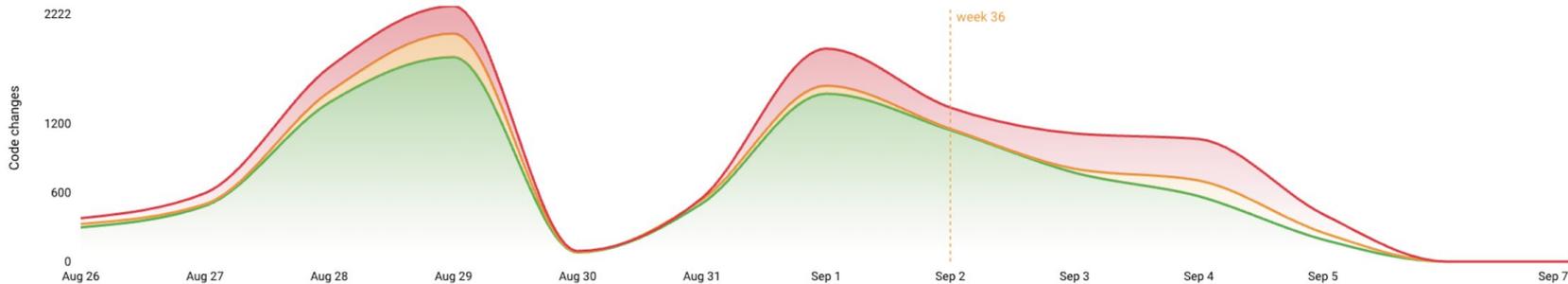
69%

Refactor

6%

Rework

25%

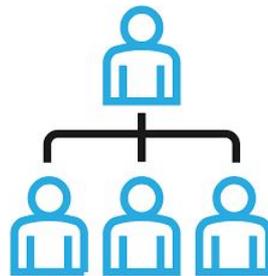


How to use Quality Metrics?

1. Identify Rework Hotspots
2. Identify struggling teams
3. “Business” KPI for Customer Happiness

Dimensions & Trending:

- ❖ Organization
- ❖ Team
- ❖ Iteration



Time for Action!

1. Get Knowledgeable:

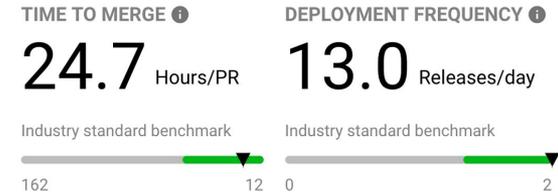
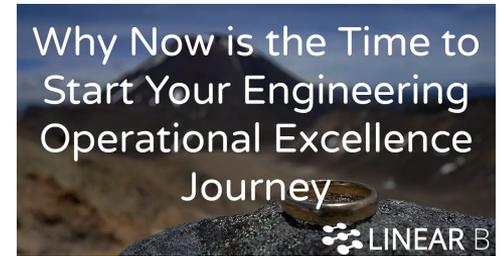
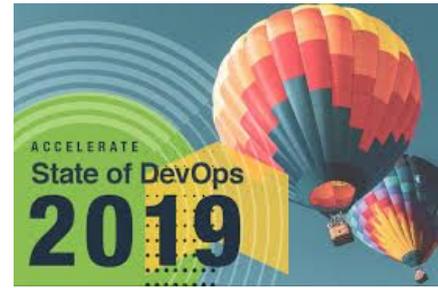
- a. Materials are out there. “Accelerate” book and DORA Reports.
- b. [LinearB Blog](#)

2. Start Measuring - Gain Visibility:

- a. Start with a few metrics
- b. [SaaS Solutions Exist](#)

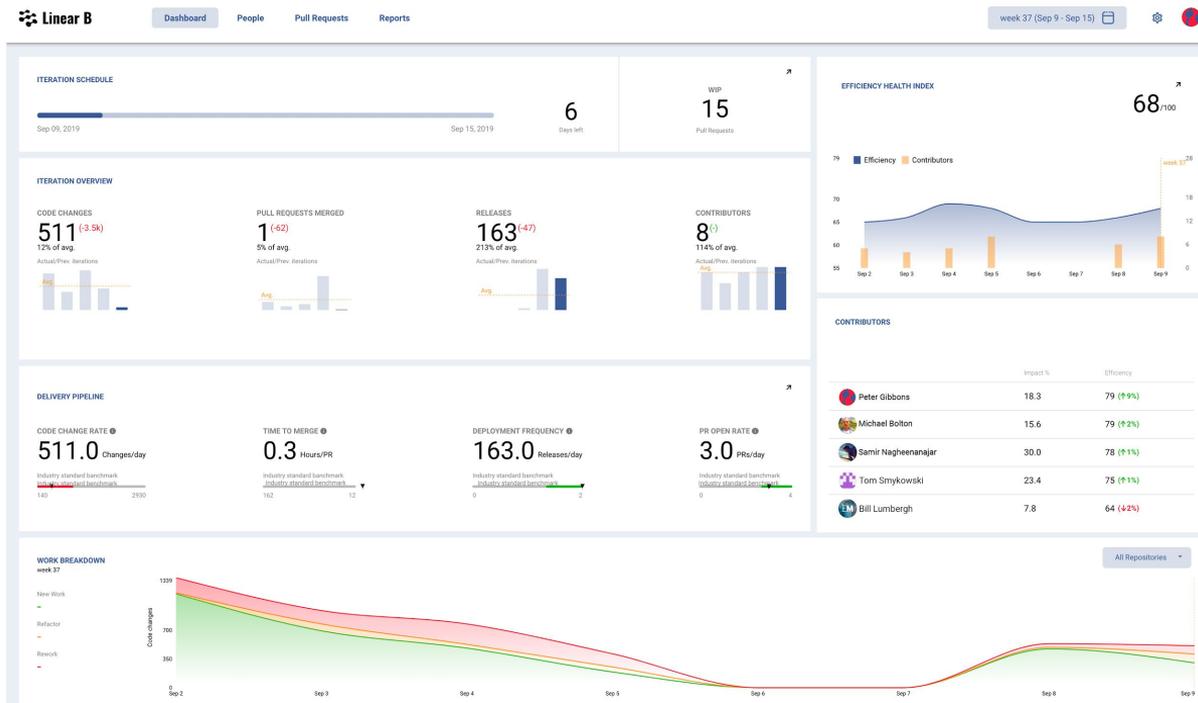
3. Incorporate:

- a. Start with your “executive meeting”. Change the dynamic.
- b. Expand to 1 of your teams - progressive rollout.





See Your Metrics Now with LinearB



Thank you!

November 2019

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